Natural Heritage & Endangered Species Program

Commonwealth of Massachusetts
Division of Fisheries & Wildlife
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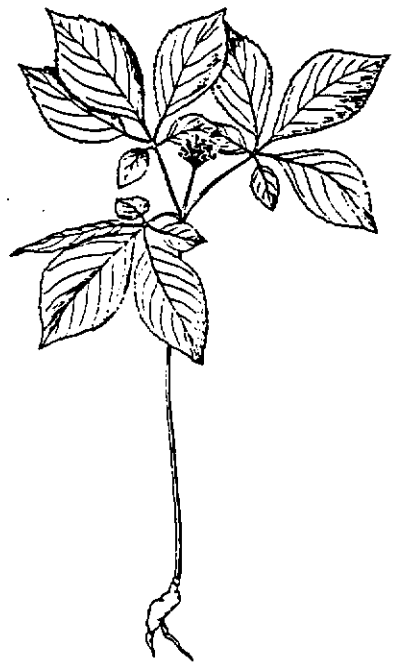
MASSACHUSETTS SPECIES OF SPECIAL CONCERN

GINSENG

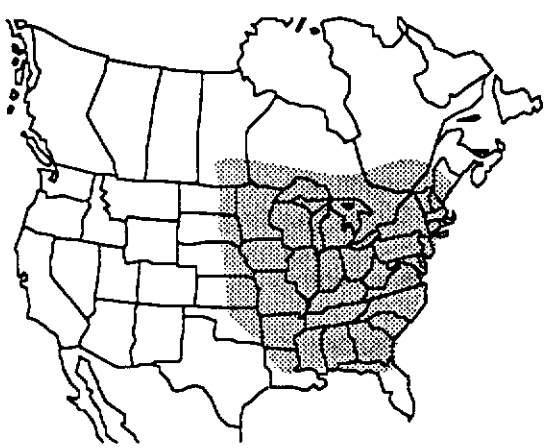
(*Panax quinquefolius* L.)



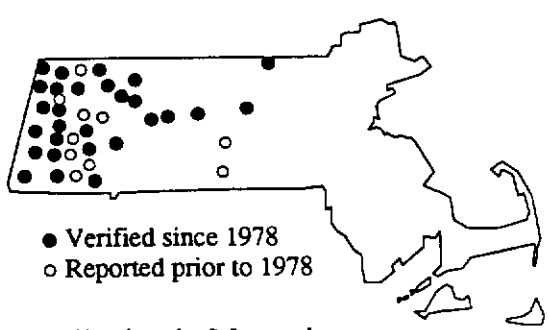
Gleason, H.A. The New Britton and Brown Illustrated Flora of the Northeastern US and Adjacent Canada. New York Botanical Garden, 1952.

DESCRIPTION: Ginseng is a perennial herb long known for the reputed medicinal and aphrodisiac properties of its aromatic root. The genus name *Panax* reflects the reputed value of various species of ginseng as a cure all--or panacea. The unbranched stem is 20 - 40 cm (8 - 15 in.) high and is topped by a single whorl of 1 to 5 palmately compound leaves. Usually, three compound leaves are produced, each with five serrate (pointed and toothed) leaflets. The tiny flowers are produced in a single, ball-like cluster in the fork where the leaf stalks meet the stem. The five-petalled flowers are white or greenish-yellow and are scented like lily-of-the-valley. They appear from late June to mid July. The fruits, bright red drupes one cm (0.4 in.) in diameter, are easily seen in the fall. (Ginseng plants less than three years old usually bear no fruit, and it takes 18-22 months between the time when the ripe fruit drops to the ground and the time the seed will germinate.)

RANGE: Ginseng is distributed in mesic woodlands throughout eastern North America, from southern Ontario and Quebec to Manitoba and Minnesota, south to northern Florida, Louisiana and Oklahoma. Colonies are usually small, but very rarely colonies may be as large as 200 individuals. In Massachusetts, they are generally between 5 and 20 individuals.



Documented Range of Ginseng



Distribution in Massachusetts

SIMILAR SPECIES IN MASSACHUSETTS: Virginia creeper (*Parthenocissus quinquefolia*), like ginseng, has five palmate leaflets, but it is usually a climbing or sprawling vine with tendrils. Also, the leaves of Virginia-creeper are alternately arranged, unlike the whorled leaves of ginseng. Wild sarsaparilla (*Aralia nudicaulis*) is also similar in appearance to ginseng. In contrast to ginseng, its five leaflets are pinnately, not palmately, arranged and its flowers are borne on a stalk separate from the leafy stem. Dwarf ginseng (*Panax trifolium*) has three leaflets that are directly attached to the leaf stalk and are smaller than leaflets of ginseng.

HABITAT IN MASSACHUSETTS: Ginseng favors cool, well-drained soils of rich, moist deciduous woods. It may also be found on rocky talus slopes. Among the specific habitats in Massachusetts are a variety of rocky habitats, including the tops of ledges, rocky talus slopes and jumbles, and rocky rich mesic woods; along a creek at the base of a fern-covered slope; and various rich mesic forest habitats, including ones at the base of a dolomitic limestone ledge and one in a ravine. None of the current sites is in full sun. Associated species include American basswood (*Tilia americana*), sugar maple (*Acer saccharum*), white ash (*Fraxinus americana*), Jack-in-the-pulpit (*Arisaema triphyllum*), large-flowered bellwort (*Uvularia grandiflora*), wild leek (*Allium tricoccum*), showy orchis (*Orchis spectabilis*), butternut (*Juglans cinerea*), shagbark hickory (*Carya ovata*), Dewey's sedge (*Carex deweyana*), wake-robin (*Trillium erectum*) and a variety of ferns (including *Dryopteris spinulosa, Dryopteris goldiana, Polystichum acrostichoides* and *Adiantum pedantum*). Several other rare plants share the same habitat in Massachusetts.

POPULATION STATUS: Ginseng is currently listed as a "Species of Special Concern" in Massachusetts. As with all species listed in Massachusetts, individuals of the species are protected from take (picking, collecting, killing...) and sale under the Massachusetts Endangered Species Act. Species of Special Concern have been documented to have suffered a decline that could threaten the species if allowed to continue unchecked or have such a restricted distribution or specialized habitat requirement that it could easily become threatened within Massachusetts. There are 47 current stations (discovered or verified since 1978) in 28 towns and 15 historical stations (unverified since 1978) in the Commonwealth. (Five towns have both current and historical stations and are represented by a single, solid dot each on the town distribution map.) Nationwide, ginseng is considered to be a locally threatened species because of over-harvesting, primarily for export to China. States where the plant is considered to be rare include Maine, New Hampshire, Connecticut, New Jersey, Delaware, South Carolina, Louisiana, Mississippi, Tennessee, Oklahoma, Indiana, Nebraska, and South Dakota. In an effort to stabilize populations, the U.S. Fish and Wildlife Service has required permits for interstate commerce and overseas export. These permits are limited to states which demonstrate adequate monitoring programs. The extent of the harvest in Massachusetts in not known. Ginseng is listed under Appendix II of the Convention on International Trade in Endangered Species.

MANAGEMENT RECOMMENDATIONS: In general, populations of ginseng are threatened because of harvesting of the root and habitat destruction. The rich woods habitat of ginseng is not wide spread in Massachusetts, so there are limited areas available for the species to do well and the fragmented condition of the forest habitat may interfere with natural reestablishment in heavily harvested or disturbed areas. Ginseng can also be killed by inadvertent trampling, sometimes by its admirers looking at the spring flora of the rich woods habitat or hikers. Since it often grows in areas of loose rock, such as on talus slopes, it can easily be dislodged. To protect plants from both trampling and collecting, access to the areas where it grows should be impeded by rerouting paths or, possibly, the use of fencing. Because it is a collected plant, locations of sites should not be publicized. Heavy grazing by cattle has also resulted in the extirpations of local populations. Ginseng reproduces very rarely by fragmentation of the rhizome; therefore, plants should not be disturbed during flowering and fruit set, and the seeds left on the plant. One study found that a decimated population was able to recover after several years--apparently through the persistence of viable seeds in the soil. The surrounding forest community had *not* been disturbed, which is thought to have contributed to the recovery. Because ginseng does not grow in open sun, forest canopies should be left undisturbed.

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